What is claimed is

1. A data searching apparatus that searches a database
of data files for a desired data file, based on a search
condition set by a user, each data file including a plurality
of search keys for providing clues to know data file contents,
comprising:
    a receiving unit operable to receive a search condition
from the user;
    a searching unit operable to search the database for
at least one data file that satisfies the search condition
received by the receiving unit; and
    an extracting unit operable to extract a plurality of
search keys, from the data file that is a search result by
the searching unit,
    wherein the searching unit further searches the database
for at least one data file that includes at least one of the
search keys extracted by the extracting unit.

2. The data searching apparatus of Claim 1, wherein
the extracting unit includes:
    a data-file-list displaying unit operable to display
a list of data files that are search results by the searching
unit;
    a file-selection receiving unit operable to receive,

7  from the user, selection of a data file from the list displayed

8  by the data-file-list displaying unit; and

9      a selective extracting unit operable to extract search

10  keys, from the data file selected in the file-selection

11  receiving unit.


1      3. The data searching apparatus of Claim 2, wherein

2      the file-selection receiving unit receives, from the

3  user, selection of a plurality of data files one after another

4  from the list displayed by the data-file-list displaying unit,

5  and then receives, from the user, one of (a) a key extraction

6  instruction to extract search keys from each of the selected

7  data files and (b) an output instruction to output each of

8  the selected data files,

9      the selective extracting unit extracts search keys from

10  each of the selected data files when the file-selection

11  receiving unit receives the key extraction instruction,

12      the searching unit, every time when the file-selection

13  receiving unit receives selection of one or a predetermined

14  number of data files, reads the selected data files and stores

15  therein the read data files, and

16      the data searching apparatus further comprises:

17      a result outputting unit operable to output the data

18  files stored in the searching unit when the file-selection

19  receiving unit receives the output instruction.

4. The data searching apparatus of Claim 2, wherein

1 the search keys are categorized in a plurality of fields,

2 the selective extracting unit extracts search keys for

3 each of the plurality of fields, from the data file selected

4 in the file-selection receiving unit, and

5 the searching unit includes:

6 a search-key-list displaying unit operable to display

7 a list of the search keys extracted for each of the plurality

8 of fields by the extracting unit;

9 a key-selection receiving unit operable to receive, from

10 the user, selection of at least one search key from the list

11 displayed by the search-key-list displaying unit; and

12 a selective searching unit operable to search the

13 database for at least one data file that includes the search

14 key selected in the key-selection receiving unit.

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5. The data searching apparatus of Claim 1, wherein

1 the search keys are categorized in a plurality of fields,

2 the extracting unit extracts search keys for each of

3 the plurality of fields, from the data file that is a search

4 result by the searching unit, and

5 the searching unit includes:

6 a search-key-list displaying unit operable to display

7 a list of the search keys extracted for each of the plurality

8 of fields by the extracting unit;

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10       a key-selection receiving unit operable to receive, from

11    the user, selection of at least one search key from the list

12    displayed by the search-key-list displaying unit; and

13       a selective searching unit operable to search the

14    database for at least one data file that includes the search

15    key selected in the key-selection receiving unit.

1       6. The data searching apparatus of Claim 1 that searches

2    for a patent data file, wherein

3       one type of the search keys is a keyword,

4       the searching unit searches the database for at least

5    one patent data file that includes a keyword,

6       the extracting unit extracts a plurality of

7    frequently-used keywords, from the patent data file that is

8    a search result by the searching unit, and

9       the searching unit further searches the database for

10    at least one patent data file that includes at least one of

11    the frequently-used keywords extracted by the extracting

12    unit.

1       7. The data searching apparatus of Claim 1 that searches

2    for a patent data file, wherein

3       one type of the search keys is an IPC symbol, where "IPC"

4    represents the International Patent Classification,

5       the searching unit searches the database for at least

6    one patent data file that includes an IPC symbol,

7        the extracting unit extracts a plurality of IPC symbols,

8    from the patent data file that is a search result by the

9    searching unit, and

10        the searching unit further searches the database for

11   at least one patent data file that includes at least one of

12   the IPC symbols extracted by the extracting unit.

8. The data searching apparatus of Claim 1 that searches

1    for a patent data file, wherein

2        one type of the search keys is an F-term, where "F-term"

3    represents the File Forming Term,

4        the searching unit searches the database for at least

5    one patent data file that includes an F-term,

6        the extracting unit extracts a plurality of F-terms,

7    from the patent data file that is a search result by the

8    searching unit, and

9        the searching unit further searches the database for

10   at least one patent data file that includes at least one of

11   the F-terms extracted by the extracting unit.

9. The data searching apparatus of Claim 1 that searches

1    for a patent data file, wherein

2        three types of the search keys are an IPC symbol, an

3    F-term, and a keyword, where "IPC" represents the

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5    International Patent Classification, and "F-term" represents

6    the File Forming Term,

7        the receiving unit receives, as search keys, at least

8    one of IPC symbols, F-terms, and keywords,

9        the searching unit searches the database for at least

10   one patent data file that includes at least one of the search

11   keys received by the receiving unit,

12       the extracting unit extracts, as search keys, IPC symbols,

13   F-terms, and frequently-used keywords, from the patent data

14   file that is a search result by the searching unit, and

15       the searching unit further searches the database for

16   at least one patent data file that includes at least one of

17   the search keys extracted by the extracting unit.


1        10. A data searching method for searching a database

2    of data files for a desired data file, based on a search

3    condition set by a user, each data file including a plurality

4    of search keys for providing clues to know data file contents,

5    the method comprising:

6        a receiving step of receiving a search condition from

7    the user;

8        a searching step of searching the database for at least

9    one data file that satisfies the search condition received

10   in the receiving step; and

11       an extracting step of extracting a plurality of search

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12  keys, from the data file that is a search result in the searching

13  step,

14      wherein in the searching step, the database is further

15  searched for at least one data file that includes at least

16  one of the search keys extracted in the extracting step.


1      11. A computer program to be executed on a computer for

2  searching a database of data files for a desired data file,

3  based on a search condition set by a user, each data file

4  including a plurality of search keys for providing clues to

5  know data file contents, the program comprising:

6      a receiving step of receiving a search condition from

7  the user;

8      a searching step of searching the database for at least

9  one data file that satisfies the search condition received

10  in the receiving step; and

11      an extracting step of extracting a plurality of search

12  keys, from the data file that is a search result in the searching

13  step,

14      wherein in the searching step, the database is further

15  searched for at least one data file that includes at least

16  one of the search keys extracted in the extracting step.

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